

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | F | ILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO |
|-----------------------------|-----------------------|------------|----------------------|---------------------|-----------------|
| 10/678,691 | 10/678,691 10/03/2003 | | Christian Mueller | ITC-338US | 9956 |
| 23122 | 7590 | 05/26/2006 | | EXAMINER | |
| RATNERP P O BOX 98 | | | | KOBERT, RUS | SSELL MARC |
| VALLEY FORGE, PA 19482-0980 | | | | ART UNIT | PAPER NUMBER |
| | • | | | 2829 | |

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | < |
|--|--|---|--|
| • | | Application No. | Applicant(s) |
| | | 10/678,691 | MUELLER, CHRISTIAN |
| | Office Action Summary | Examiner | Art Unit |
| | | Russell M. Kobert | 2829 |
| Period fo | The MAILING DATE of this communication app or Reply | pears on the cover sheet with the c | orrespondence address |
| A SHO WHIC - Exter after - If NO - Failu Any r | ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING Donsions of time may be available under the provisions of 37 CFR 1.1 SIX (6) MONTHS from the mailing date of this communication. Period for reply is specified above, the maximum statutory period to reply within the set or extended period for reply will, by statute reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE | N. nely filed the mailing date of this communication. D (35 U.S.C. § 133). |
| Status | | | |
| 2a)⊠ | Responsive to communication(s) filed on <u>09 M</u> This action is FINAL . 2b) This Since this application is in condition for allowa closed in accordance with the practice under E | action is non-final. nce except for formal matters, pro | |
| Dispositi | on of Claims | | |
| 5) □ 6) □ 7) ⊠ 8) □ Applicati | Claim(s) 1-24 is/are pending in the application 4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed. Claim(s) 1-6,8,10-17,19-21,23 and 24 is/are reclaim(s) 7,9,18 and 22 is/are objected to. Claim(s) are subject to restriction and/or ion Papers The specification is objected to by the Examine | wn from consideration. ejected. or election requirement. | |
| 10) | The drawing(s) filed on is/are: a) acc Applicant may not request that any objection to the Replacement drawing sheet(s) including the correc The oath or declaration is objected to by the Ex | epted or b) objected to by the drawing(s) be held in abeyance. Settion is required if the drawing(s) is ob | e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d). |
| Priority (| under 35 U.S.C. § 119 | | |
| 12)[a) | Acknowledgment is made of a claim for foreign All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority document application from the International Burea See the attached detailed Office action for a list | ts have been received. ts have been received in Applicat rity documents have been receive u (PCT Rule 17.2(a)). | ion No ed in this National Stage |
| 2) Notice 3) Infor | ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) er No(s)/Mail Date | 4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal F 6) Other: | |

Application/Control Number: 10/678,691 Page 2

Art Unit: 2829

1. Applicant's arguments with respect to claims 1-6, 8, 10-17, 19-21 and 23-24 have been considered but are moot in view of the new ground(s) of rejection.

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 3. Claims 1-6, 8, 10-17, 19-21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerschner et al (4993136) in view of Miller (6218910).

Kerschner et al describes an apparatus and method for establishing a distance between a test head and a peripheral, comprising:

A frame (col 5, ln 31-33) which is coupled to one of the test head (col 5, ln 46-55; lower probe plate 42 attached to frame is also attached to a test head) and the peripheral (11) and which is detachably coupled to the other of the test head and the peripheral (anything coupled to another is always detachable); and

A plurality of linear units (16) for causing adjustable movement of the frame towards or away from a docking surface of said test head and said peripheral to change the distance (col 7, ln 28-50);

An actuating member (20, 20a, 19 and 18) which, when activated, causes actuation of the plurality of linear units to cause adjustable movement of the frame;

The frame preventing the test head and the peripheral from being closer to each other than said distance (inherent operation of the frame disclosed in Kerschner et al),

Wherein, at said distance, the test head and the peripheral communicate (col 5, ln 56-66; also a test head is inherently designed to communicate with a probe plate); as mentioned in claims 1 and 12.

As to claims 2 and 13 having one of the test head and the peripheral coupled to alignment features for docking the one of the test head and the peripheral with the other of the test head and peripheral is described by Kerschner et al (the combination of assemblies 12, 14, 40 and 42 provide alignment features for docking the test head and the peripheral).

As to claims 3 and 14 having the linear unit including one of a male (16) and female (18) threaded member attached to the other of the test head and peripheral is described by Kerschner et al.

As to claims 4 and 15 having the frame including the other of the male (16) and the female member (17) threaded member is described by Kerschner et al.

As to claims 5 and 16 having one of the male and female threaded member rotated in order to move the frame towards or away from the docking surface of the other of the test head and the peripheral is described by Kerschner et al (col 7, ln 39-50).

As to claims 6 and 17 having the other of the male and female member rotated in order to move the frame towards or away from the docking surface of the other of the

test head and the peripheral is described by Kerschner et al (inherent to the dynamic relationship between members 16 and 17).

As to claims 8 and 19, having the linear unit as one of a plurality of linear units to move the frame is described by Kerschner et al (note plurality of linear units 16 shown in Figure 1).

As to claims 10 and 20 having a crank (20a) rotated to cause the plurality of linear units to move the frame is described by Kerschner et al.

As to claims 11 and 21 the docking surface (probe plates 40 and 42) between the frame and one of the test head and the peripheral is described by Kerschner et al.

As to claims 23 and 24, having an alignment feature coupled to one of the frame and the peripheral and a guide coupled to the other of the frame and the peripheral, the guide and the alignment feature separated prior to the adjustable movement of the frame, the guide engaging the alignment feature at said distance is described according to an alternate embodiment in Kerschner et al (col 10, ln 21-35).

Although Kerschner et al does not explicitly describe the test head having test head electrical contacts, a peripheral having peripheral electrical contacts wherein the test head electrical contacts and the peripheral electrical contacts are in contact with each other,

Miller shows a test head (20) having test head electrical contacts (30), a peripheral (22) having peripheral electrical contacts (probe card must have contacts to electrically communicate with the test head 20 because Miller describes the electrical relationship between the test head and a device under test via the probe card; also note

Art Unit: 2829

"points of contact on its upper surface for the pogo pin connectors 30," see col 5, In 25-

39) wherein the test head electrical contacts and the peripheral electrical contacts are in

contact with each other.

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have combined the teaching of Miller with that of Kerschner et al

to make the claimed invention because providing enhancements for reliable electrical

contact between a test head and a probe card using minimal wire lengths between test

electronics and the device under test is a desirable attribute when testing highly

complex, compact circuits at the fastest possible rates resulting in improvements in

reliability combined with efficiency.

4. Claims 7, 9, 18 and 22 continue to be objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims for the reasons of record

noted in the Office Action mailed on 6 December 2005.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

Application/Control Number: 10/678,691

Art Unit: 2829

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Russell Kobert whose telephone number is (571) 272-

1963. The Examiner's Supervisor, Ha Tran Nguyen, can be contacted at (571) 272-

1678. For an automated menu of Tech Center 2800 phone numbers call (571) 272-

2800.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Russell M. Kőbert Patent Examiner

Group Art Unit 2829

May 23, 2006

VINH NGUYÊN Î

Page 6

PHIMAHY EXAMINE

05/24/06